REMARKS

Claims 1-33 are pending in the Application.

Claims 1-33 have been rejected.

Claims 1-3, 5, 9-11, and 29 have been amended. No new matter has been added. Support for the amendments to Claims 1, 9, and 29, can be found, at least, within paragraphs [0038]-[0043] and Figure 1A. Amendments to dependent Claims 2, 3, 5, 10 and 11 have been made for consistency with the independent claims on which they respectively depend.

Specification

The amendments to Claims 1, 9, and 29 are objected to because they purportedly introduce new matter into the disclosure. Without agreeing with the Office Action position, and in the interest of advancing prosecution, Applicants have amended Claims 1, 9, 29, and the respective dependent claims to address the Examiner's concerns. Applicants respectfully submit that explicit support for these amendments can be found, at least, within paragraphs [0038]-[0043] and Figure 1A. Thus, Applicants respectfully submit that this objection is overcome.

Rejection of Claims under 35 U.S.C. § 112

Claims 1, 9, and 29 are rejected under 35 U.S.C. 112, first paragraph, as purportedly failing to comply with the written description requirement. Applicants respectfully submit that these amended claims explicitly draw support from at least paragraphs [0038]-[0043] and Figure 1A, and that this rejection is overcome.

Rejection of Claims under 35 U.S.C. § 103(a)

Claims 1-33 stand rejected under 35 U.S.C. 103(a) as purportedly being unpatentable over U.S. Patent No. 5,758,355, issued to Buchanan ("Buchanan"). Applicants respectfully traverse this rejection.

Amended independent Claim 1 now reads:

> synchronizing inventory transaction information of a computerized inventory management system, wherein
> the computerized inventory management system comprises a plurality of inventory systems,
> said synchronizing is bidirectional, and
> said synchronizing comprises
> extracting inventory transaction information in a source format that is associated with the source inventory system, wherein
> the source inventory system is any one of the plurality of inventory systems;
> converting the inventory transaction information in the source format into inventory transaction information in an intermediate format; and
> converting the inventory transaction information in the intermediate format into inventory transaction information in a target format that corresponds to the target inventory system, wherein
> the target inventory system is any one of the plurality of inventory systems.

(Emphasis added)

Amended independent Claims 9 and 29 recite comparable limitations. Applicants respectfully submit that Buchanan fails to show, teach or suggest, at the very least, bidirectionally synchronizing inventory transaction information between any source and target inventory system among a plurality of inventory systems.

The Office Action cites Buchanan as purportedly teaching bidirectional synchronization between a single source and a single target inventory system, as previously claimed. However, Buchanan is a client/server model. Applicants respectfully submit that such a model cannot be characterized as teaching the foregoing limitations, nor the newly added limitations, among other of the limitations. For example, the newly added limitations recite a plurality of inventory systems – among which inventory transaction information can be bidirectionally synchronized between any of these inventory systems. A client/server model, as in Buchanan, employs a markedly different

architecture, and so, operation, in which the server is a central repository of data and clients access only subsets of the server data at a time.

Buchanan is directed to "distributed databases, and more particularly, to distributed relational databases in which a client computer maintains a database that is a subset of a server database." Buchanan 1:7-10. The synchronization that is cited by the Office Action occurs between the server and one of the clients. *See* Buchanan 1:23-25 ("bidirectional exchange of information between the server and client databases is referred to as database synchronization."). Thus, in the cited sections of Buchanan, the data to be synchronized is only between a server and a client.

The fact that one endpoint of the synchronization is always going to be a server in Buchanan demonstrates why Buchanan cannot be expected to teach or suggest the claimed invention. Even if such a parallel could be successfully drawn (which Applicants respectfully submit is not the case), whether the server is treated as a target or a source does not change the fact that there is only one server in Buchanan's client/server arrangement. An ordinary artisan would simply have no rationale for or the ability to somehow expand Buchanan's teachings to encompass an architecture that includes multiple systems, in which any one of the systems can be a source system and any other of which can be a target system.

The claims recite a computerized inventory management system that comprises a plurality of inventory systems. Further, because there is a plurality of the claimed inventory systems, the bidirectional synchronization has multiple potential endpoints on either end of the synchronization. This is made clear in Claim 1 by the fact that the source inventory system, from which inventory transaction information is extracted, is "any one of the plurality of inventory systems" and that the target inventory system is also "any one of the plurality of inventory systems." The claimed concept of a plurality of systems, any of which can be at either of the two endpoints of the synchronization of inventory transaction information, cannot be found within (nor implied from) the teachings of Buchanan, even when the teachings of Buchanan are considered in light of the knowledge of an ordinary artisan at the time of the claimed invention.

Further, the Office Action cites to Buchanan's use of a distribution table as purported disclosure of the claimed intermediate format. *See* Office Action, pp. 5 and 6,

citing Buchanan 3:29-52 and 4:53-67. However, Applicants respectfully submit that Buchanan's distribution tables are simply the mechanism by which data on the server is identified in order to improve the distribution of database information from the server to the client. Thus, Buchanan's distribution tables merely address the distribution of data – in no way does this show, teach or suggest a format into which any data can (or even might be) converted. Simply put, information related to the location or movement of data is not information related to the format of that data, and is certainly not the data itself (in whatever format).

By further contrast, the claimed intermediate format is capable of serving a purpose that is not even remotely envisioned by Buchanan: reducing the number of conversions necessary to convert inventory transaction information from any source format to any target format by an order of complexity, from $O(n^2)$ down to $O(n)$. The distinctive functions served by Buchanan's distribution tables and the claimed intermediate format illustrate how different these two concepts are.

Buchanan explains that, "[t]he present invention provides novel data structures and processes for use in extracting information from a server database during the synchronization of the server database and the client database." Buchanan 3:29-32 (Emphasis supplied). This data structure in Buchanan is a "distribution table" that can be "used to identify information in related server database tables that requires extraction because information has changed since the last synchronization." Buchanan 36-39. Buchanan further notes that the distribution table eliminates the need to use transaction logs to identify changed information. *See* Buchanan 39-41. In other words, Buchanan's distribution tables serve to identify the data to be synchronized. There is no indication within any portion of Buchanan that the distribution table performs any function comparable to that of the claimed intermediate format – which defines an intermediate state of the data (the intermediate format) between conversions: a first conversion from a source inventory system to an intermediate format, and then a conversion from the intermediate format to a target inventory system.

Further, even if it could be said that a conversion of data were somehow needed in Buchanan (which is not the case), and also that Buchanan's distribution tables somehow carried out this conversion (an assertion also not conceded to by the Applicants), there

would still be no supportable reason nor need for more than one conversion of data in order to transfer data from the server to any given client. However, because Buchanan makes no suggestion whatsoever that the clients use different data formats, this issue cannot be reached – there is no showing, teaching or suggestion that a conversion would ever be needed to transfer data from the server to a client.

The foregoing conclusion is mandatory, for at least the reason that, as a result of the markedly different architecture employed by Buchanan, Buchanan finds itself oblivious to the problems recognized and addressed by the claimed invention. Given the single server system in Buchanan with, say, *n* clients, were to Buchanan employ conversions, there would need only be *n* such conversions – one for each client. In other words, O(*n*). By contrast, in a system with *n* systems (each of which that can be a source or a target in a given operation), there will need to be (*n**(*n*-1))/2 conversions – one conversion from each of the *n* possible source systems to each of the *(n-1)* remaining target systems, plus (*n* – 1) possible source systems to each of the (*n* – 2) remaining target systems and so on. In other words, O(n^2).

However, if a common intermediate format is introduced, as in the claimed invention, the number of conversions required to convert from any one source system to any target system is reduced to *n* + (*n* – 1). The reduction occurs because only *n* conversions are necessary to convert each of the *n* source formats to the single intermediate format and only (*n* – 1) conversions are necessary to convert from the single intermediate format to each of the (*n* – 1) possible remaining target formats. By using an intermediate format, it is no longer necessary for the claimed invention to convert from <u>each</u> of the *n* source systems to those of <u>each</u> of the (*n* – 1) target systems – the claimed system need only be able to convert from each of the source formats to the single intermediate system, and then from the intermediate format to that of each of the target formats. As will be further appreciated, assuming *n* inventory systems, each of which can be a source or target, one can conclude that the use of an intermediate format reduces the number of format conversions from O(n^2) to O(*n*).

Moreover, instead of a single conversion from source system to target system, the claimed intermediate format necessitates two conversions in order to move data from a source system to a target system: the conversion from the source format to the

intermediate format, and the conversion from the intermediate format to the target format. The second conversion, necessary to go to and from the intermediate format, is the trade-off for reducing the number of direct conversions that would otherwise be required. Another benefit of the claimed invention is that when a new inventory system is added, the only new conversions needed are those between the new inventory system's format and the intermediate format. Thus, the added inventory system results in only two extra conversions: to/from the intermediate format from/to the new inventory system format. The remaining inventory systems are unaffected by the addition of the new inventory system. The result is constant value scalability.

Thus, even if Buchanan's system were to perform conversions of data between the server and client, Buchanan only has the single server as one endpoint of any added, putative conversions. The result is that even if Buchanan performed conversions between the server and the client, only a single conversion would be needed in any event. Therefore, in Buchanan there is no need of anything even remotely comparable to the claimed intermediate format. In fact, such an extra conversion step would not only be pointless, but would be counter-productive by increasing the computing resources needed to perform the requisite conversion. This explains the complete lack of teaching of anything in any way comparable to the claimed intermediate format within Buchanan.

Thus, it cannot be said that Buchanan teaches or suggests synchronizing that comprises a conversion of inventory transaction information from a source format into an intermediate format, and then from the intermediate format into a target format, where the source system and the target system are any of a plurality of inventory systems.

Applicants therefore respectfully request the Examiner's reconsideration and withdrawal of the rejections to Claims 1, 9, 29, and all claims dependent therefrom, and an indication of the allowability of same.

CONCLUSION

In view of the amendments and remarks set forth herein, the application and the claims therein are believed to be in condition for allowance without any further examination and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is invited to telephone the undersigned.

If any extensions of time under 37 C.F.R. § 1.136(a) are required in order for this submission to be considered timely, Applicants hereby petition for such extensions. Applicants also hereby authorize that any fees due for such extensions or any other fee associated with this submission, as specified in 37 C.F.R. § 1.16 or § 1.17, be charged to Deposit Account 502306.

Respectfully submitted,

/ Samuel G. Campbell III /

Samuel G. Campbell III
Attorney for Applicants
Reg. No. 42,381
Telephone: (512) 439-5084
Facsimile: (512) 439-5099